

To: Climate Action Team
From: California Forestry Association
Date: January 31, 2005
Re: Addendum to the California Forestry Association's December 13, 2005 Comments on the Public Review Draft of Climate Action Team Report to the Governor and Legislature

The California Forestry Association appreciates the opportunity to file supplemental comments on the Climate Action Team's draft report to the governor and the legislature. The extension provides an opportunity for us to more carefully examine all the information that has been made available to the Climate Action Team.

In addition to our December 13, 2005 submittal to the Climate Action Team, we provide more detailed comments here on two particular items.

1. Emissions and particulates associated with wildfire

We concur with the taskforce's conclusions that wildfire will adversely affect human health, cause significant emissions of greenhouse gases, destroy life and property, and reduce air quality.

The California Climate Change Center (December, 2005, Possible Scenarios of Climate Change in California: Summary and Recommendations) estimates that "the risk of large wildfires statewide may rise almost 35 percent by mid-century and 55 percent by the end of the century under a medium-high emissions scenario." We're uncertain whether or not this analysis included the prediction that the Sierra Nevada snowpack "could decrease by as much as 90 percent in the higher temperature scenarios". A dramatic reduction in snowpack would lead to longer, hotter summers at higher elevations having a dramatic effect on tree mortality and, thus susceptibility to wildfire.

Statewide carbon dioxide emissions due to wildfire, according to California Department of Forestry and Fire Protection, are currently at about 7 million tons/year. Obviously wildfires simply mean it will be significantly more difficult and costly for the State to meet its emission reduction goals. Aggressive active management of all forestlands in California, including the federal national forests, can greatly reduce the threat of wildfire and the resultant emissions, air quality degradation, human health effects, and loss of life and property. Further, a reduction in wildfires means tremendous potential savings in fire readiness and suppression costs

Californians consume a significant amount of wood products each year. Using wood for construction is beneficial for the environment in a number of ways. For example, wood is renewable and energy efficient, requiring far less energy to produce than other building materials. Products made from steel, cement and aluminum can take up to 250 percent

more energy, and associated emissions, to create than wood products. Furthermore, harvesting timber in California reduces the threat of catastrophic wildfire because harvesting produces forests that are healthier and are less prone to burn than unmanaged forests.

Californians consume 8-9 billion board feet of wood products annually. Statewide, non-reserved forestlands are capable of producing 5-6 billion board feet. Current harvest levels are about 2 billion board feet. Hence, about 80 percent of California's consumption of wood products is imported ("leakage"). Imports could be reduced to about 30 percent if all non-reserved forestlands, including federal national forests, were actively managed.

Obviously producing 5-6 billion board feet annually in California would take major change in State and Federal policy but the potential benefits are enormous. Aggressively managing forestlands can result in substantial reduction in "leakage" and substantial reduction in acres burned annually from wildfires and, thus, substantial reductions in emissions.

Returning to a production level of 5-6 billion board feet/year would also create new jobs and manufacturing infrastructure. Each billion board feet is estimated to create 5,500 direct and 22,000 indirect and induced jobs (Sierra Nevada Framework Final Environmental Impact Statement, Vol. 2, Chapter 3, part 5.2, pp. 382, 394, and part 6, p. 544). Further, higher merchantable timber production leads to more biomass available for power plants to generate electricity. For every 50 million board feet processed at a sawmill, there is enough biomass produced to run a 9 megawatt cogeneration plant.

The Governor should urge the President to assist in California's endeavor to reduce emissions by having the Forest Service adopt aggressive active management goals for California's national forests. Current Forest Service management in the Sierra Nevada range will lead to denser forests in the future. Currently about 8 million acres of California's national forestlands are at risk to catastrophic wildfire. The current management strategy intends to treat less than 0.3 percent of the standing inventory annually; less than 20 percent of the net growth, hence, stands will become denser over time (Sierra Nevada Framework Plan Amendment Record of Decision, January 2004, p.3). And, as we pointed out in our December 13, 2005 comments, simplification of State permitting processes would greatly facilitate active management of industrial and non-industrial private timberlands.

2) The complexity in adequately accounting for carbon in forest management

We carefully reviewed the Public Interest Energy Research (PIER) program. Their data shows that the carbon equation is extremely sensitive to assumptions and values used.

We provide a sample listing of some of the variables that we believe need careful assessment before determining what values to use:

- PIER suggests that extending tree rotation ages would increase carbon sequestration. We disagree with this assertion, and have compiled research to support the fact that shorter rotations will have a greater overall carbon benefit than longer rotations.
- Whether or not pulp and paper store carbon and for how long.
- How to address "leakage".
- Decomposition rates of wood -- PIER suggests 2 percent/year for solid wood and 5 percent/year for pulp while Birdsey (1992a) estimates less than 1 percent annual decomposition for solid wood and even lower rates for landfills.
- Percent of merchantable timber volumes stored in wood products -- PIER suggests 43 percent stored in wood products and the remaining 57 percent immediately emitted. We believe a careful assessment would show that California sawmills provide about 60-70 percent of merchantable volume going to wood products and the remainder being used as biomass to generate electricity.
- Estimates of growth and yield -- PIER suggests the average volume for high site Ponderosa Pine at year 50 is about 3,200 cubic feet/acre. We believe a careful examination of intensively managed lands with statistically valid inventories will show yields of over double the value that PIER estimated for a similar site index. Thus, the capability of California's forestlands to store and sequester more carbon is substantial.
- How to account for wood substitutes (cement, steel, and aluminum) and the corresponding energy necessary to create the products and associated emissions.
- Accounting for utilization of non-merchantable volume (biomass) to produce electricity and steam to dry lumber thereby offsetting the need for power generated from fossil fuels.
- The increases in stored carbon, sequestered carbon, and reductions in emissions that would result from vigorously growing, actively managed forestlands that are resistant to insect, disease, and wildfire. The reductions in mortality and reductions in acres burned have substantial positive benefits.

In summary, we cannot overemphasize our concern with the assumptions and values used to address the amount of stored carbon, sequestered carbon, and emissions associated with forestlands, their health and vigor, and the corresponding risk to catastrophic wildfire. The assumptions and values used have been translated into the protocols of the California Climate Action Registry. Inappropriate assumptions and values can lead to very erroneous conclusions.

Again, we greatly appreciate the opportunity to provide comment to the Climate Action Team and look forward to working with you to discuss any forest-related matter in greater detail.